

#10



PCT10

## RAW SEQUENCE LISTING

DATE: 08/19/2002

PATENT APPLICATION: US/10/069,527

TIME: 15:30:16

Input Set : A:\Subst Seq List.txt

Output Set: N:\CRF4\08192002\J069527.raw

3 <110> APPLICANT: The Horticulture and Food Research Institute of NZ  
 5 <120> TITLE OF INVENTION: Seedless Fruit Production  
 7 <130> FILE REFERENCE: 26329 MRB  
 C--> 9 <140> CURRENT APPLICATION NUMBER: US/10/069,527  
 C--> 10 <141> CURRENT FILING DATE: 2002-06-27  
 12 <150> PRIOR APPLICATION NUMBER: NZ337688  
 13 <151> PRIOR FILING DATE: 1999-09-07  
 15 <160> NUMBER OF SEQ ID NOS: 7  
 17 <170> SOFTWARE: PatentIn Ver. 2.1  
 19 <210> SEQ ID NO: 1  
 20 <211> LENGTH: 868  
 21 <212> TYPE: DNA  
 22 <213> ORGANISM: Malus domestica  
 24 <220> FEATURE:  
 25 <221> NAME/KEY: CDS  
 26 <222> LOCATION: (1)..(648)  
 28 <400> SEQUENCE: 1  
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 31 1 5 10 15  
 33 agg cag gtg acc tac tcc aag agg agg aat ggg att atc aag aag gca 96  
 34 Arg Gln Val Thr Tyr Ser Lys Arg Arg Asn Gly Ile Ile Lys Lys Ala  
 35 20 25 30  
 37 aag gag atc act gtt cta tgt gat gct aaa gta tct ctt atc att tat 144  
 38 Lys Glu Ile Thr Val Leu Cys Asp Ala Lys Val Ser Leu Ile Ile Tyr  
 39 35 40 45  
 41 tct agc tct ggg aag atg gtt gaa tac tgc agc cct tca act acg ctg 192  
 42 Ser Ser Ser Gly Lys Met Val Glu Tyr Cys Ser Pro Ser Thr Thr Leu  
 43 50 55 60  
 45 aca gaa atc ttg gac aaa tac cat gga caa tct ggg aag aag ttg tgg 240  
 46 Thr Glu Ile Leu Asp Lys Tyr His Gly Gln Ser Gly Lys Lys Leu Trp  
 47 65 70 75 80  
 49 gat gct aag cat gag aac ctc agc aat gaa gtg gat aga gtc aag aaa 288  
 50 Asp Ala Lys His Glu Asn Leu Ser Asn Glu Val Asp Arg Val Lys Lys  
 51 85 90 95  
 53 gac aat gac agc atg caa gta gag ctc agg cat ctg aag gga gag gat 336  
 54 Asp Asn Asp Ser Met Gln Val Glu Leu Arg His Leu Lys Gly Glu Asp  
 55 100 105 110  
 57 atc aca tca ttg aac cat gta gag ctg atg gcc tta gag gaa gca ctt 384  
 58 Ile Thr Ser Leu Asn His Val Glu Leu Met Ala Leu Glu Glu Ala Leu  
 59 115 120 125  
 61 gaa aat ggc ctt aca agt atc cgg gac aag cag tcc aag ttc gtc gac 432  
 62 Glu Asn Gly Leu Thr Ser Ile Arg Asp Lys Gln Ser Lys Phe Val Asp

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63      130      135      140
65 atg atg aga gac aat gga aag gca ctg gaa gat gag aat aag cgc ctc 480
66 Met Met Arg Asp Asn Gly Lys Ala Leu Glu Asp Glu Asn Lys Arg Leu
67 145      150      155      160
69 act tat gag ctg caa aaa caa cag gag atg aaa ata aaa gag aat gtg 528
70 Thr Tyr Glu Leu Gln Lys Gln Gln Glu Met Lys Ile Lys Glu Asn Val
71      165      170      175
73 aga aac atg gaa aat ggg tat cat cag agg cag ctg ggg aac tac aac 576
74 Arg Asn Met Glu Asn Gly Tyr His Gln Arg Gln Leu Gly Asn Tyr Asn
75      180      185      190
77 aac aac cag cag cag ata cct ttt gcc ttc cgc gtg cag cct att cag 624
78 Asn Asn Gln Gln Gln Ile Pro Phe Ala Phe Arg Val Gln Pro Ile Gln
79      195      200      205
81 cca aat ctc cag gag aga atc taa ttagatatat cttgcatttg catgctcttt 678
82 Pro Asn Leu Gln Glu Arg Ile
83      210      215
85 ctaactagtt atattatctc tccacctctc tctctctttt catctgtcaa ggagttctta 738
87 agtttatgtc agatttccaa tggtttgtaa tggaattagc ttcgttatga ggctttgttg 798
89 tgaaccttgt aataattaag gcgtgcatga actcggtttg tgggaaaaaa aaaaaaaaaa 858
91 aaaaaaaaaa 868
94 <210> SEQ ID NO: 2
95 <211> LENGTH: 215
96 <212> TYPE: PRT
97 <213> ORGANISM: Malus domestica
99 <400> SEQUENCE: 2
100 Met Gly Arg Gly Lys Val Glu Ile Lys Arg Ile Glu Asn Ser Ser Asn
101 1 5 10 15
102 Arg Gln Val Thr Tyr Ser Lys Arg Arg Asn Gly Ile Ile Lys Lys Ala
103 20 25 30
104 Lys Glu Ile Thr Val Leu Cys Asp Ala Lys Val Ser Leu Ile Ile Tyr
105 35 40 45
106 Ser Ser Ser Gly Lys Met Val Glu Tyr Cys Ser Pro Ser Thr Thr Leu
107 50 55 60
108 Thr Glu Ile Leu Asp Lys Tyr His Gly Gln Ser Gly Lys Lys Leu Trp
109 65 70 75 80
110 Asp Ala Lys His Glu Asn Leu Ser Asn Glu Val Asp Arg Val Lys Lys
111 85 90 95
112 Asp Asn Asp Ser Met Gln Val Glu Leu Arg His Leu Lys Gly Glu Asp
113 100 105 110
114 Ile Thr Ser Leu Asn His Val Glu Leu Met Ala Leu Glu Glu Ala Leu
115 115 120 125
116 Glu Asn Gly Leu Thr Ser Ile Arg Asp Lys Gln Ser Lys Phe Val Asp
117 130 135 140
118 Met Met Arg Asp Asn Gly Lys Ala Leu Glu Asp Glu Asn Lys Arg Leu
119 145 150 155 160
120 Thr Tyr Glu Leu Gln Lys Gln Gln Glu Met Lys Ile Lys Glu Asn Val
121 165 170 175
122 Arg Asn Met Glu Asn Gly Tyr His Gln Arg Gln Leu Gly Asn Tyr Asn
123 180 185 190

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124 Asn Asn Gln Gln Gln Ile Pro Phe Ala Phe Arg Val Gln Pro Ile Gln
125      195      200      205
126 Pro Asn Leu Gln Glu Arg Ile
127      210      215
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132 <211> LENGTH: 982
133 <212> TYPE: DNA
134 <213> ORGANISM: Malus domestica
136 <220> FEATURE:
137 <221> NAME/KEY: CDS
138 <222> LOCATION: (1)..(699)
140 <400> SEQUENCE: 3
141 atg gcg cgc ggg aag att gaa atc aag ctg atc gaa aac cag acc aac 48
142 Met Ala Arg Gly Lys Ile Glu Ile Lys Leu Ile Glu Asn Gln Thr Asn
143 1 5 10 15
145 agg cag gtg acc tac tcc aag aga aga aat ggg atc ttc aag aag gct 96
146 Arg Gln Val Thr Tyr Ser Lys Arg Arg Asn Gly Ile Phe Lys Lys Ala
147 20 25 30
149 cag gag ctc acc gtt ctc tgt gat gcc aag gtc tcc ctc att atg ctc 144
150 Gln Glu Leu Thr Val Leu Cys Asp Ala Lys Val Ser Leu Ile Met Leu
151 35 40 45
153 tcc aac act aat aaa atg cac gag tat atc agc cct acc act acg acc 192
154 Ser Asn Thr Asn Lys Met His Glu Tyr Ile Ser Pro Thr Thr Thr Thr
155 50 55 60
157 aag agt atg tat gat gac tat cag aaa act atg ggg atc gat ctg tgg 240
158 Lys Ser Met Tyr Asp Asp Tyr Gln Lys Thr Met Gly Ile Asp Leu Trp
159 65 70 75 80
161 agg aca cac gag gag tcg atg aaa gac acc ttg tgg aag ttg aaa gag 288
162 Arg Thr His Glu Glu Ser Met Lys Asp Thr Leu Trp Lys Leu Lys Glu
163 85 90 95
165 atc aac aat aag ctg agg aga gag atc agg cag agg ttg ggc cat gat 336
166 Ile Asn Asn Lys Leu Arg Arg Glu Ile Arg Gln Arg Leu Gly His Asp
167 100 105 110
169 cta aat ggc ctg agc ttt gac gag ctg gct tct ctt gac gat gag atg 384
170 Leu Asn Gly Leu Ser Phe Asp Glu Leu Ala Ser Leu Asp Asp Glu Met
171 115 120 125
173 cag tct tcc ttg gat gcc ata cgt caa agg aag tac cat gtg atc aaa 432
174 Gln Ser Ser Leu Asp Ala Ile Arg Gln Arg Lys Tyr His Val Ile Lys
175 130 135 140
177 act cag acg gag acc acc aag aag aag gtt aag aac ttg gag caa aga 480
178 Thr Gln Thr Glu Thr Thr Lys Lys Lys Val Lys Asn Leu Glu Gln Arg
179 145 150 155 160
181 aga gga aac atg ctg cat ggc tat ttt gac cag gaa gca gcc ggc gag 528
182 Arg Gly Asn Met Leu His Gly Tyr Phe Asp Gln Glu Ala Ala Gly Glu
183 165 170 175
185 gat cca cag tat ggt tat gag gac aat gag gga gac tac gaa tct gca 576
186 Asp Pro Gln Tyr Gly Tyr Glu Asp Asn Glu Gly Asp Tyr Glu Ser Ala
187 180 185 190
189 ctt gca ttg tca aat ggg gcg aat aac ttg tac act ttc cac ctc cac 624

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190 Leu Ala Leu Ser Asn Gly Ala Asn Asn Leu Tyr Thr Phe His Leu His
191      195      200      205
193 cac cct aac ctc cac cac gga gga agc tcg ctc ggc tcc tcc att act 672
194 His Pro Asn Leu His His Gly Gly Ser Ser Leu Gly Ser Ser Ile Thr
195      210      215      220
197 cat ctg cac gat ctc cgc ctt gct tga tcgtgatctg agatatgatt 719
198 His Leu His Asp Leu Arg Leu Ala
199 225      230
201 aatcatcact aagttatata ttaagggtcac ttataactgc ttttgctcta aagtgtttgc 779
203 ttggtgacta tctttaggca aggagttaga cttggactac ctctgaaaac agatgcataa 839
205 atatgtgtgt ggtgttttaa tcaatgatag cactaaaaaa atccgcgccc ttgttgcttg 899
207 tgggtttgtt tgtataatta atacttctat tctatatata tcatggcaga cattgctttt 959
209 gataaaaaaa aaaaaaaaaa aaa 982
212 <210> SEQ ID NO: 4
213 <211> LENGTH: 232
214 <212> TYPE: PRT
215 <213> ORGANISM: Malus domestica
217 <400> SEQUENCE: 4
218 Met Ala Arg Gly Lys Ile Glu Ile Lys Leu Ile Glu Asn Gln Thr Asn
219 1 5 10 15
220 Arg Gln Val Thr Tyr Ser Lys Arg Arg Asn Gly Ile Phe Lys Lys Ala
221 20 25 30
222 Gln Glu Leu Thr Val Leu Cys Asp Ala Lys Val Ser Leu Ile Met Leu
223 35 40 45
224 Ser Asn Thr Asn Lys Met His Glu Tyr Ile Ser Pro Thr Thr Thr
225 50 55 60
226 Lys Ser Met Tyr Asp Asp Tyr Gln Lys Thr Met Gly Ile Asp Leu Trp
227 65 70 75 80
228 Arg Thr His Glu Glu Ser Met Lys Asp Thr Leu Trp Lys Leu Lys Glu
229 85 90 95
230 Ile Asn Asn Lys Leu Arg Arg Glu Ile Arg Gln Arg Leu Gly His Asp
231 100 105 110
232 Leu Asn Gly Leu Ser Phe Asp Glu Leu Ala Ser Leu Asp Asp Glu Met
233 115 120 125
234 Gln Ser Ser Leu Asp Ala Ile Arg Gln Arg Lys Tyr His Val Ile Lys
235 130 135 140
236 Thr Gln Thr Glu Thr Thr Lys Lys Lys Val Lys Asn Leu Glu Gln Arg
237 145 150 155 160
238 Arg Gly Asn Met Leu His Gly Tyr Phe Asp Gln Glu Ala Ala Gly Glu
239 165 170 175
240 Asp Pro Gln Tyr Gly Tyr Glu Asp Asn Glu Gly Asp Tyr Glu Ser Ala
241 180 185 190
242 Leu Ala Leu Ser Asn Gly Ala Asn Asn Leu Tyr Thr Phe His Leu His
243 195 200 205
244 His Pro Asn Leu His His Gly Gly Ser Ser Leu Gly Ser Ser Ile Thr
245 210 215 220
246 His Leu His Asp Leu Arg Leu Ala
247 225 230
251 <210> SEQ ID NO: 5

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## RAW SEQUENCE LISTING

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252 <211> LENGTH: 25  
 253 <212> TYPE: DNA  
 254 <213> ORGANISM: Artificial Sequence  
 256 <220> FEATURE:  
 257 <223> OTHER INFORMATION: Description of Artificial Sequence: Made in lab  
 259 <220> FEATURE:  
 260 <221> NAME/KEY: allele  
 261 <222> LOCATION: (14) /  
 262 <223> OTHER INFORMATION: n represents a, c, g, or t.  
 264 <220> FEATURE:  
 265 <221> NAME/KEY: allele /  
 266 <222> LOCATION: (17)  
 267 <223> OTHER INFORMATION: n represents a, c, g, or t.  
 269 <220> FEATURE:  
 270 <221> NAME/KEY: allele  
 271 <222> LOCATION: (20) /  
 272 <223> OTHER INFORMATION: n represents a, c, g, or t.  
 274 <400> SEQUENCE: 5  
 275 cggaattcat gggnmngngn aarrt 25  
 277 <210> SEQ ID NO: 6  
 278 <211> LENGTH: 30  
 279 <212> TYPE: DNA  
 280 <213> ORGANISM: Artificial Sequence  
 282 <220> FEATURE:  
 283 <223> OTHER INFORMATION: Description of Artificial Sequence: Made in lab  
 285 <220> FEATURE:  
 286 <221> NAME/KEY: allele  
 287 <222> LOCATION: (19)  
 288 <223> OTHER INFORMATION: n represents a, c, g, or t.  
 290 <220> FEATURE:  
 291 <221> NAME/KEY: allele  
 292 <222> LOCATION: (22)  
 293 <223> OTHER INFORMATION: n represents a, c, g, or t.  
 295 <220> FEATURE:  
 296 <221> NAME/KEY: allele /  
 297 <222> LOCATION: (28)  
 298 <223> OTHER INFORMATION: n represents a, c, g, or t.  
 300 <400> SEQUENCE: 6  
 301 cgctcgagga tccggytgna tnggytgnac 30  
 304 <210> SEQ ID NO: 7  
 305 <211> LENGTH: 20  
 306 <212> TYPE: DNA  
 307 <213> ORGANISM: Artificial Sequence  
 309 <220> FEATURE:  
 310 <223> OTHER INFORMATION: Description of Artificial Sequence: Made in lab  
 312 <400> SEQUENCE: 7  
 313 gagagagaac tagtctcgag 20

RAW SEQUENCE LISTING ERROR SUMMARY  
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Output Set: N:\CRF4\08192002\J069527.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; N Pos. 14,17,20

Seq#:6; N Pos. 19,22,28